

Claim Amendments:

Kindly amend the claims to read as follows:

Claims 1 to 6 (canceled)

7. (currently amended) The intraoral camera system as set forth in Claim 9 further comprising a server for storing image data captured by ~~the~~ said first CCD camera and outputting the image data as required to project the stored image data on the monitor on an as needed basis.

8. (currently amended) The intraoral camera system as set forth in Claim 9, wherein the monitor is made in the form of a hand mirror such that ~~the~~ said first CCD camera image data received can be viewed without changing the patient's position.

9. (currently amended) An intraoral camera system comprising:

a dental mirror including a reflector having a light transmitting aperture provided in the center or in any other portion of the reflector for transmitting light therethrough,

a first CCD camera secured in a position adjacent to a back surface of the reflector with an incident portion of ~~the~~ said first CCD camera being adjacent to and in optical communication with the light transmitting aperture of the reflector,

a transmitter connected to ~~the~~ said first CCD camera for transmitting an image captured by ~~the~~ said first CCD camera, and

a visual monitor for displaying the image captured by ~~the~~ said first CCD camera as transmitted by the transmitter, and

further comprising:

the visual monitor being a liquid crystal plate having a light transmitting aperture at the center where some liquid crystal material is removed to transmit light therethrough, and

a second CCD camera provided on a back surface of the liquid crystal plate with an incident portion of ~~the~~ said second CCD camera being adjacent to and in optical communication with the light transmitting aperture,

whereby an object located in front of ~~the~~ said second CCD camera ~~is projected~~ may alternatively be displayed on ~~a screen of the liquid crystal plate~~ said visual monitor in the same manner that a ~~reflector projects~~ generic hand mirror displays the object.

10. (currently amended) The intraoral camera system as set forth in Claim 8 9, which further comprises an image conversion processor for inverting data input from ~~the~~ said second CCD camera at the center of ~~the hand mirror shaped liquid crystal screen~~ said visual monitor upside down or backside forward or counterclockwise or clockwise.

11. (previously presented) An intraoral camera system comprising:

a dental mirror including a reflector having a light transmitting aperture provided in the center or in any other portion of the reflector for transmitting light therethrough,

a CCD camera secured in a position adjacent to a back surface of the reflector with an incident portion of the CCD camera being adjacent to and in optical communication with the light transmitting aperture of the reflector,

a transmitter connected to the CCD camera for transmitting an image captured by the CCD camera, and

a visual monitor for displaying the image captured by the CCD camera as transmitted by the transmitter,

wherein the CCD camera is rotatably attached to the center of the back surface of the reflector, and

wherein the dental mirror further comprises

a gear attached to a same rotary shaft as that of the CCD camera such that the gear rotates around the CCD camera,

a micromotor provided on the back surface of the reflector such that the motion of the micromotor is incorporated with that of the gear,

a battery provided inside a holder for the reflector for driving the micromotor,

a gyro sensor provided inside the holder for outputting a signal associated with an angle of inclination of the dental mirror to a horizontal plane, and

a controller for driving the micromotor in accordance with the signal from the gyro sensor to control rotation angles of the CCD camera,

thereby allowing an image captured at a preset angle to be displayed regardless of the angle at which a dentist holds or insert the dental mirror into the patient's mouth.

12 to 15 (canceled)

16. (currently amended) The intraoral camera system as set forth in Claim 9 further comprising a heater provided at a position in the dental mirror where the heater does not shield the incident portion of ~~the~~ said first CCD camera but inhibits fogging of the reflector and the incident portion of ~~the~~ said first CCD camera due to breathing by a patient.

17. (currently amended) The dental mirror as set forth in Claim 9 further comprising:
a light source in optical communication with the light transmitting aperture in said dental mirror for illuminating the target area in the patient's mouth.

18. (previously presented) A dental mirror comprising:
a reflector having a light transmitting aperture provided in the center or in any other portion of the reflector for transmitting light therethrough,
a CCD camera secured in a position adjacent to a back surface of the reflector with an incident portion of the CCD camera adjacent to and in optical communication with the light transmitting aperture of the reflector,
a gear attached to a same rotary shaft as that of the CCD camera such that the gear rotates around the CCD camera,
a battery driven micromotor,
a battery positioned inside the dental mirror,
a gyro sensor for outputting a signal that incorporates a motion of the gyro sensor with that of the gear on inclination of the dental mirror to a horizontal plane or floor, and a control mechanism for controlling the rotation angle of the CCD camera in accordance with the signal from the gyro sensor.

19 to 24 (canceled)

25. (previously presented) A dental mirror equipped with a CCD camera comprising:

an optical fiber having its one end located in such a manner that an incident portion thereof is at a light transmitting portion of a dental mirror a part of which surface allows light to transmit therethrough, which fiber is coaxially with, or passes through, a retainer portion of said dental mirror,

the other end of the optical fiber being provided with a CCD camera for capturing image data at the incidence portion of said dental mirror, and

a hand mirror shaped monitor having an illumination light source for projecting the target image of said camera;

wherein the field of view obtained at said optical fiber's incident portion is captured by the CCD camera in said hand mirror shaped monitor and is displayed on the hand mirror monitor and, at the same time, the light from the illumination light source of the hand mirror shaped monitor is projected in the direction in which the dental mirror captures the image, and

wherein the optical fiber is made detachable such that, when the optical fiber is removed, the image in front of the hand mirror monitor is displayed by the CCD camera thereby providing a hand mirror monitor which can be used just like a reflector hand mirror.

26. (previously presented) The dental mirror equipped with a CCD camera as set forth in Claim 25 further comprising:

a hose made of a flexible material that is connected to a compressor,

an air exhaust pipe one end of which is connected to said hose and the other end being provided with a jet nozzle pointed toward the optical fiber's incident portion,

an additional hose made of a flexible material that is connected to a vacuum device,

an air suction pipe with one end thereof connected to said additional hose and with the other end having a suction inlet located at a point which is suited to suck in the air exhausted from the jet nozzle,

said dental mirror provided in such a manner that the suction pipe and the exhaust pipe are coaxial with, or pass through, the retainer portion wherein air is ejected to the mirror surface while sucking air therefrom to provide an air curtain effect, thereby preventing patient's mouth cavity from drying and preventing the mirror surface from fogging.

27. (previously presented) The intraoral camera system as set forth in Claim 11 further comprising a server for storing image data captured by the CCD camera and outputting the image data as required to project the stored image data on the monitor on an as needed basis.

28. (previously presented) The intraoral camera system as set forth in Claim 11, wherein the monitor is made in form of a hand mirror such that the CCD camera image data received can be viewed without changing the patient's position.

29. (previously presented) The intraoral camera system as set forth in Claim 11 further comprising a heater provided at a position in the dental mirror where the heater does not shield the incident portion of the CCD camera but inhibits fogging of the reflector and the incident portion of the CCD camera due to breathing by a patient.

30. (previously presented) The dental mirror as set forth in Claim 11 further comprising:

a light source in optical communication with the light transmitting aperture for illuminating the target area in the patient's mouth.

31. (currently amended) A CCD camera equipped dental mirror comprising:

a dental mirror with a mirror surface for use with dental treatments;

a CCD camera attached to a back surface of said dental mirror and having an incoming light portion provided in a portion of the mirror surface of the dental mirror; and

a hand-held monitor for ~~projecting~~ displaying thereon a video image similar to ~~a virtual~~ an image captured through reflection from the mirror surface of the ~~CCD camera installed dental mirror, without the dentist's need to shift the direction of his or her eyesight from the patient's mouth,~~ when the ~~virtual~~ video image captured with the CCD camera is received wire or wireless and displayed on the monitor.

32. (currently amended) A CCD camera equipped dental mirror according to claim 31 further comprising a server for saving the ~~virtual~~ video image captured by the CCD camera and providing the ~~virtual~~ video image as its output to the monitor whereby the ~~virtual~~ video image is displayed on the monitor from time to time.

33. (currently amended) A CCD camera equipped dental mirror according to claim 31 wherein the monitor is provided in a form of a hand mirror to be held by the patient so that the patient may move the hand mirror to any desired position without moving his or her head when viewing the ~~virtual~~ video image, ~~no matter whatever position the patient takes for dental treatment, vertical (sitting) position or horizontal (sleeping) position.~~

34. (currently amended) A CCD camera equipped dental mirror according to claim 31 further comprising an air curtain device for removing moisture from the mirror surface of the dental mirror and preventing drying up of the patient mouth, the air curtain device comprising an injection pipe, a suction pipe and a vacuum machine connected with the injection and suction pipes, said dental mirror having an elongated handle with said mirror surface at an end of said handle, said injection and suction pipes leading from said mirror surface along said elongated handle to said vacuum machine.

35 to 37 (canceled)